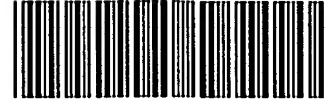


RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/530,792A
Source: 1Fw16
Date Processed by STIC: 11/10/05

ENTERED



IFW/6

RAW SEQUENCE LISTING

DATE: 11/10/2005

PATENT APPLICATION: US/10/530,792A

TIME: 12:29:56

Input Set : D:\3589.1015-008 Seq List.txt

Output Set: N:\CRF4\11102005\J530792A.raw

```

4 <110> APPLICANT: Croce, Carlo M.
5   Calin, George A.
7 <120> TITLE OF INVENTION: NOVEL TUMOR SUPPRESSOR GENE AND
8   COMPOSITIONS AND METHODS FOR MAKING AND USING THE SAME
11 <130> FILE REFERENCE: 3589.1015-008
13 <140> CURRENT APPLICATION NUMBER: 10/530,792A
-> 14 <141> CURRENT FILING DATE: 2005-05-13
16 <150> PRIOR APPLICATION NUMBER: PCT/US2003/032270
17 <151> PRIOR FILING DATE: 2003-10-10
19 <150> PRIOR APPLICATION NUMBER: 60/417,842
20 <151> PRIOR FILING DATE: 2002-10-11
22 <160> NUMBER OF SEQ ID NOS: 17
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 3791
28 <212> TYPE: DNA
29 <213> ORGANISM: Homo sapiens
31 <400> SEQUENCE: 1
32 caccacaagtc tgagttgcta aaaaatggag ctgtcactgg gccttgctct gccaggacct 60
33 gcagagccgg ggacctctct gtggcaagcc cagcaagatg actgctctga ggcgccctag 120
34 ggctgaggga ggggccgtga caccagcccc gccccccagc cacctgggaa aaggaagcac 180
35 aaaaaggaga agcagcaacg gctgctctgc ttccttccca tctcgctctt gggtcatgcc 240
36 tggccagcag aaagcagctc cataggggag gagagccacg caggatctca cagctgcagt 300
37 ctaatagtaa cacagaggat tcagcagtgg ccacatggg ttctgtgaat tccagaggtc 360
38 acaaggcgga agcccagggt gtgatgatgg gcctggactc ggccgggcaag accacgctcc 420
39 tttacaagct gaagggccac cagctgggtg agacctgcc cactgttggg ttcaacgtgg 480
40 agcctctgaa agctcctggg cagctgtcac tgactctctg ggacgttggg gggcaggccc 540
41 cgctcagagc cagctggaag gactatctgg aaggcacaga taccctctgt tacgtgctgg 600
42 acagcacaga tgaagcccg cttaccagag cggcggtga gctcacagaa gtcctgaacg 660
43 accccaacat ggctggcgct cccttcttgg tgctggccaa caagcaggag gcacctgatg 720
44 cacttccgct gcttaagatc agaaacaggc tgagtctaga gagattccag gacctgct 780
45 gggagctccg gggctgcagt gccctcactg gggaggggct gcccagggcc ctgcagagcc 840
46 tgtggagcct cctgaaatct cgcagctgca tgtgtctgca ggcgagagcc catggggctg 900
47 agcgcggaga cagcaagaga tcttgatcca gacagagcag catatctttg ctcatacaaa 960
48 ctagaagaac cagctgatcc ttgagaaatt tacgcttagt ctatcaaaca agaaatgctg 1020
49 gcttggcccg gtggctcatg cctgtaatcc cagcactgtg ggagaccacg gtgggggaat 1080
50 cccttgagcc caggagtgtg agagcaacat cacaacaccc catttctact aataatcaaa 1140
51 aaattggccg ggcattggtg catgtgcctg tagtcccagc tacttgggag gctgaggcag 1200
52 gagaatcgct tgagcccaag aggtagaggt tgcaagtgcg caagatcgcg cactgcact 1260
53 ccagtctggg caacagagtg agacctgtc tcaataataa taataataat aatgatgata 1320
54 ctctaagaaa aaaaatctca catacttcat ttaatagctc gttaccaagt gtgaatgaag 1380
55 caatatgtca taatagagta gccactggtt gcataataat agagacctaa attctcaaat 1440
56 agggaaagag gttttaaaat caaatgtgag gccaggtgca gtgggtcatg ggcgaggag 1500

```

RAW SEQUENCE LISTING

DATE: 11/10/2005

PATENT APPLICATION: US/10/530,792A

TIME: 12:29:56

Input Set : D:\3589.1015-008 Seq List.txt

Output Set: N:\CRF4\11102005\J530792A.raw

```

57 ggcagattac ttgaggctag gagttcaaga ccagcctggc caacatggtg aaaccccatc 1560
58 tctactgaaa atacaaaaat taggcatagt ggtgcacgcc tgcagtccca gctactcagg 1620
59 aggttgaggc agaagaatcg cttgaacca ggaagtggag gttgcagtga gccgagattg 1680
60 tgctgctgca ctccagcctg ggtgaaaaag acaggctgtg tctccaaaaa gaaaaaaaaa 1740
61 agtcaaattc aaatatcatc tggacatgtc acaatggatc gcggatcctt atgagtgtt 1800
62 ttccccagtg gccctgggg atgtgccact gtcactcaga agggcaagct aggcagggcc 1860
63 catccaacag caggggtctg cagggttagac gttccctggc ctgggacgct caccctggg 1920
64 caagaggctg gaagttcaca ccatccaaaa tttatccttg ttttttttct gatgctaatt 1980
65 agcctctccc gattttatga catcttgtgt tgatcttttt caaaaactca ttttcttttt 2040
66 tttccttctc ttttctcctt cttgtagcac atatctttcg ttaaagatca gatcaataaa 2100
67 atattttatt tattcattaa tttacaaaaa aaaacagagc atttagtttg tggcaaaaac 2160
68 actgagcttt cgaatatgaa tcatgtgctt taggtgggag ttgtgaattc tgaagataca 2220
69 gatgacagtg acgaatgcct tctgtctcat gattgacagg gaaaaggaag gttgaccata 2280
70 gcatcctaga aggtcatca ggtgatcatt acctagcatc catgaagcac ctgaaattat 2340
71 ttgcaaaatg ttacgctttg gaccattttt ccggggaagg agatccagaa ctttttacc 2400
72 gattttcaaa gacatctgtg actcccaaaa gttaacaatc actgatgtgg ttgttgtatc 2460
73 cctcatccaa cccagaaca ctttctgtaa tctgagtttt ttaatggcaa gtggcctata 2520
74 ttttagcacct gttctcatgt taaacagctc tgaatgttag atattctttc ttatcctgga 2580
75 ctggttctct ctatctctgg agtaatgcag tataaattgg ccatcagtac cctcctaaaa 2640
76 tctgagatct gccaggcccc tcttctaaca ccagggttag catgcttggg tatttccagt 2700
77 acttgtagct caacatgttt caagacgctg tgtagacac tagggatgca aagatgaatg 2760
78 agtaagggcc tcaggcctca tggaagggtg gacagtaaa acattactcc cataaaaatg 2820
79 tgaggagaga gactcagttc agcaactgtt tattctgttt attgagcact tacttggacc 2880
80 aagcactgtg gtcttggtgt tttacataga ctgtctctaa ttctcacaac tctgcaaaat 2940
81 atatatattc ccattttata aaactacaaa ctgaggctca gagaagggtg gacctcttgt 3000
82 tgcttgaggc acagagttat aaagtaacat atctggaatt tgaaatgaga tctgtttagg 3060
83 gctaattgctg catttttcta caacatcatg cctctagaag gtttaagcta ggtaggcttt 3120
84 cagccagcag acatgatggg gagagccttc taataagagg gaagagactg cttggaagca 3180
85 tgaaggaggg tgtaagaaag ataagtaagt cagtgtactt gcaacagagg cttgggatga 3240
86 aggggtgggtg aagttgacat cacgatagaa aacaaaactg gaatgggagt ttaggtccaa 3300
87 tttgggcaag gttgtttgaa tttcaataat caggggtttg ggtcaaggaa gaaaaatcat 3360
88 gggacttgcc atttaggagg ataattttgt ggtagtgtgg aggtgaaata aagagaaaag 3420
89 ggaaccttg agctgggaag gcaggaaacc ggctagatga ccatcacaca gcaaaggagg 3480
90 gagtggaaga gagatgagaa aattgagagc tattattaag aaaaacagtt gagagaggaa 3540
91 gaatttgaag agggctcaag attttgagtc cacatgacag aaggactgga atgccatgaa 3600
92 ctggagaagg tgagcgtga agaaccagga tgggacgggg ctggaacagc tgggttcagc 3660
93 ttttgcaagg tgggtacgtg tttggttata gctgctttca gattgttcca ttatctgtac 3720
94 tccaacaac cctgccggat atatttggtg gctttcactc aaaaaaaaaa aaaaaaaaaa 3780
95 aaaaaaaaaa a 3791

```

97 <210> SEQ ID NO: 2

98 <211> LENGTH: 196

99 <212> TYPE: PRT

100 <213> ORGANISM: Homo sapiens

102 <400> SEQUENCE: 2

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103 Met Gly Ser Val Asn Ser Arg Gly His Lys Ala Glu Ala Gln Val Val
104 1 5 10 15
105 Met Met Gly Leu Asp Ser Ala Gly Lys Thr Thr Leu Leu Tyr Lys Leu
106 20 25 30
107 Lys Gly His Gln Leu Val Glu Thr Leu Pro Thr Val Gly Phe Asn Val

```

RAW SEQUENCE LISTING

DATE: 11/10/2005

PATENT APPLICATION: US/10/530,792A

TIME: 12:29:56

Input Set : D:\3589.1015-008 Seq List.txt

Output Set: N:\CRF4\11102005\J530792A.raw

```

108          35          40          45
109 Glu Pro Leu Lys Ala Pro Gly His Val Ser Leu Thr Leu Trp Asp Val
110          50          55          60
111 Gly Gly Gln Ala Pro Leu Arg Ala Ser Trp Lys Asp Tyr Leu Glu Gly
112 65          70          75          80
113 Thr Asp Ile Leu Val Tyr Val Leu Asp Ser Thr Asp Glu Ala Arg Leu
114          85          90          95
115 Pro Glu Ser Ala Ala Glu Leu Thr Glu Val Leu Asn Asp Pro Asn Met
116          100          105          110
117 Ala Gly Val Pro Phe Leu Val Leu Ala Asn Lys Gln Glu Ala Pro Asp
118          115          120          125
119 Ala Leu Pro Leu Leu Lys Ile Arg Asn Arg Leu Ser Leu Glu Arg Phe
120          130          135          140
121 Gln Asp His Cys Trp Glu Leu Arg Gly Cys Ser Ala Leu Thr Gly Glu
122 145          150          155          160
123 Gly Leu Pro Glu Ala Leu Gln Ser Leu Trp Ser Leu Leu Lys Ser Arg
124          165          170          175
125 Ser Cys Met Cys Leu Gln Ala Arg Ala His Gly Ala Glu Arg Gly Asp
126          180          185          190
127 Ser Lys Arg Ser
128          195

```

131 <210> SEQ ID NO: 3

132 <211> LENGTH: 24

133 <212> TYPE: RNA

134 <213> ORGANISM: Artificial Sequence

136 <220> FEATURE:

137 <223> OTHER INFORMATION: Ribozyme

139 <400> SEQUENCE: 3

140 cugaugaguc cgcgaggacg aaac

24

142 <210> SEQ ID NO: 4

143 <211> LENGTH: 26

144 <212> TYPE: RNA

145 <213> ORGANISM: Artificial Sequence

147 <220> FEATURE:

148 <223> OTHER INFORMATION: Ribozyme

-> 150 <221> NAME/KEY: misc_feature

151 <222> LOCATION: 1

152 <223> OTHER INFORMATION: n is complementary to the target mRNA flanking the

153 5' end of the structural domain

-> 155 <221> misc_feature

156 <222> LOCATION: 26

157 <223> OTHER INFORMATION: n is complementary to the target mRNA flanking the

158 3' end of the structural domain.

-> 160 <400> 4

-> 161 ncugaugagu cgcgaggac gaaacn

26

163 <210> SEQ ID NO: 5

164 <211> LENGTH: 25

165 <212> TYPE: DNA

166 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING

DATE: 11/10/2005

PATENT APPLICATION: US/10/530,792A

TIME: 12:29:56

Input Set : D:\3589.1015-008 Seq List.txt

Output Set: N:\CRF4\11102005\J530792A.raw

```

168 <220> FEATURE:
169 <223> OTHER INFORMATION: Oligonucleotide primer
171 <400> SEQUENCE: 5
172 ccatgggttc tgtgaattcc agagg                25
174 <210> SEQ ID NO: 6
175 <211> LENGTH: 25
176 <212> TYPE: DNA
177 <213> ORGANISM: Artificial Sequence
179 <220> FEATURE:
180 <223> OTHER INFORMATION: Oligonucleotide primer
182 <400> SEQUENCE: 6
183 cagtggctct ggaatctctc tagac                25
185 <210> SEQ ID NO: 7
186 <211> LENGTH: 24
187 <212> TYPE: DNA
188 <213> ORGANISM: Artificial Sequence
190 <220> FEATURE:
191 <223> OTHER INFORMATION: Oligonucleotide primer
193 <400> SEQUENCE: 7
194 gccagcagaa agcagctcca tagg                24
196 <210> SEQ ID NO: 8
197 <211> LENGTH: 24
198 <212> TYPE: DNA
199 <213> ORGANISM: Artificial Sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: Oligonucleotide primer
204 <400> SEQUENCE: 8
205 ttcaggaggc tccacaggct ctgc                24
207 <210> SEQ ID NO: 9
208 <211> LENGTH: 23
209 <212> TYPE: DNA
210 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
213 <223> OTHER INFORMATION: Oligonucleotide primer
215 <400> SEQUENCE: 9
216 gaggtatgta ttgaaagaag agg                23
218 <210> SEQ ID NO: 10
219 <211> LENGTH: 23
220 <212> TYPE: DNA
221 <213> ORGANISM: Artificial Sequence
223 <220> FEATURE:
224 <223> OTHER INFORMATION: Oligonucleotide primer
226 <400> SEQUENCE: 10
227 aacaaaaccc aataacaact cca                23
229 <210> SEQ ID NO: 11
230 <211> LENGTH: 21
231 <212> TYPE: DNA
232 <213> ORGANISM: Artificial Sequence
234 <220> FEATURE:

```

RAW SEQUENCE LISTING

DATE: 11/10/2005

PATENT APPLICATION: US/10/530,792A

TIME: 12:29:56

Input Set : D:\3589.1015-008 Seq List.txt

Output Set: N:\CRF4\11102005\J530792A.raw

```

235 <223> OTHER INFORMATION: Oligonucleotide primer
237 <400> SEQUENCE: 11
238 cagaagacag tagctgatgt g 21
240 <210> SEQ ID NO: 12
241 <211> LENGTH: 21
242 <212> TYPE: DNA
243 <213> ORGANISM: Artificial Sequence
245 <220> FEATURE:
246 <223> OTHER INFORMATION: Oligonucleotide primer
248 <400> SEQUENCE: 12
249 gagcaaagat atgctgctct g 21
251 <210> SEQ ID NO: 13
252 <211> LENGTH: 23
253 <212> TYPE: DNA
254 <213> ORGANISM: Artificial Sequence
256 <220> FEATURE:
257 <223> OTHER INFORMATION: Oligonucleotide primer
259 <400> SEQUENCE: 13
260 gctgagtcca gagagattcc agg 23
262 <210> SEQ ID NO: 14
263 <211> LENGTH: 20
264 <212> TYPE: DNA
265 <213> ORGANISM: Artificial Sequence
267 <220> FEATURE:
268 <223> OTHER INFORMATION: Oligonucleotide primer
270 <400> SEQUENCE: 14
271 tctcgctgc agacacatgc 20
273 <210> SEQ ID NO: 15
274 <211> LENGTH: 17
275 <212> TYPE: DNA
276 <213> ORGANISM: Homo sapiens
278 <400> SEQUENCE: 15
279 agctcccagc agtggtc 17
281 <210> SEQ ID NO: 16
282 <211> LENGTH: 17
283 <212> TYPE: DNA
284 <213> ORGANISM: Homo sapiens
286 <220> FEATURE:
287 <221> NAME/KEY: misc_feature
288 <222> LOCATION: 7, 11
289 <223> OTHER INFORMATION: n = A,T,C or G
291 <400> SEQUENCE: 16
-> 292 agctccnagc ngtggtc 17
294 <210> SEQ ID NO: 17
295 <211> LENGTH: 17
296 <212> TYPE: DNA
297 <213> ORGANISM: Homo sapiens
299 <400> SEQUENCE: 17
300 agctcctagc agtggtc 17

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/530,792A

DATE: 11/10/2005
TIME: 12:29:57

Input Set : D:\3589.1015-008 Seq List.txt
Output Set: N:\CRF4\11102005\J530792A.raw

Base Note:

Presence of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; N Pos. 1, 26
Seq#:16; N Pos. (7, 11)

VERIFICATION SUMMARY

DATE: 11/10/2005

PATENT APPLICATION: US/10/530,792A

TIME: 12:29:57

Input Set : D:\3589.1015-008 Seq List.txt

Output Set: N:\CRF4\11102005\J530792A.raw

14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
150 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
155 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4
160 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4
161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
292 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0